

CITY OF GROVELAND

DARK SKY INITIATIVE

City of Groveland
Planning & Zoning Division
4/23/2022







INTERNATIONAL DARK-SKY ASSOCIATION

The **International Dark-Sky Association** (IDA) works to limit light pollution by promoting responsible outdoor lighting solutions.

darksky.org

What Light Pollution Looks Like

- *Design of fixtures*
- *Direction the fixtures are pointed*
- *Lights are too bright*
- *Color temperatures too 'cool'*



Reasons to Limit Light Pollution

1. *Public Safety*
2. *Energy Conservation*
3. *Wildlife and Ecology*
4. *Human Health*
5. *Connection with History*
6. *Inspiration*



Lighting Public Safety Example

1. *Expressing the importance of shielding*
2. *Using motion sensors for crime prevention*
3. *Brighter is not necessarily safer!*



Public Safety

Driver/Pedestrian Safety

1. *Full-cutoff lighting*
2. *Eliminating blinding glare*
3. *Increasing visibility*



Light Pollution

Pedestrian Safety

1. *Unnecessary glare*
2. *Too much intensity (lumens)*
3. *Color temp too cool*





Wildlife and Ecology

1. *Bright lights at night are unnatural*
2. *Help protect our bats, bugs, frogs, lightning bugs, migratory birds*





How do we combat light pollution?

- Educate at events about lighting
- Adopt lighting policies to manage impacts
- Use IDA-Approved light fixtures or equivalent at home
- Protect dark-sky places from increasing light pollution
- Reward dark-sky places with certification



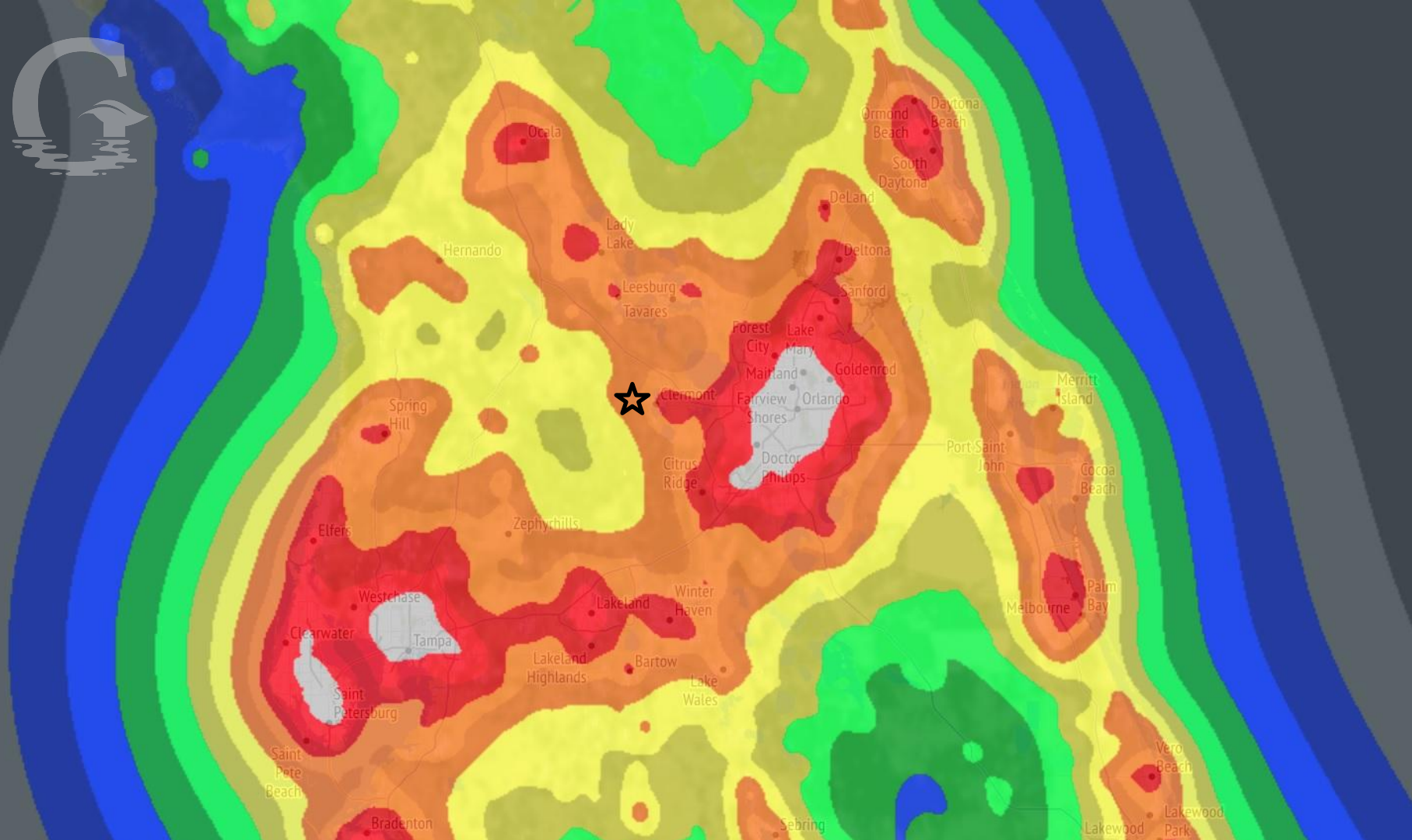


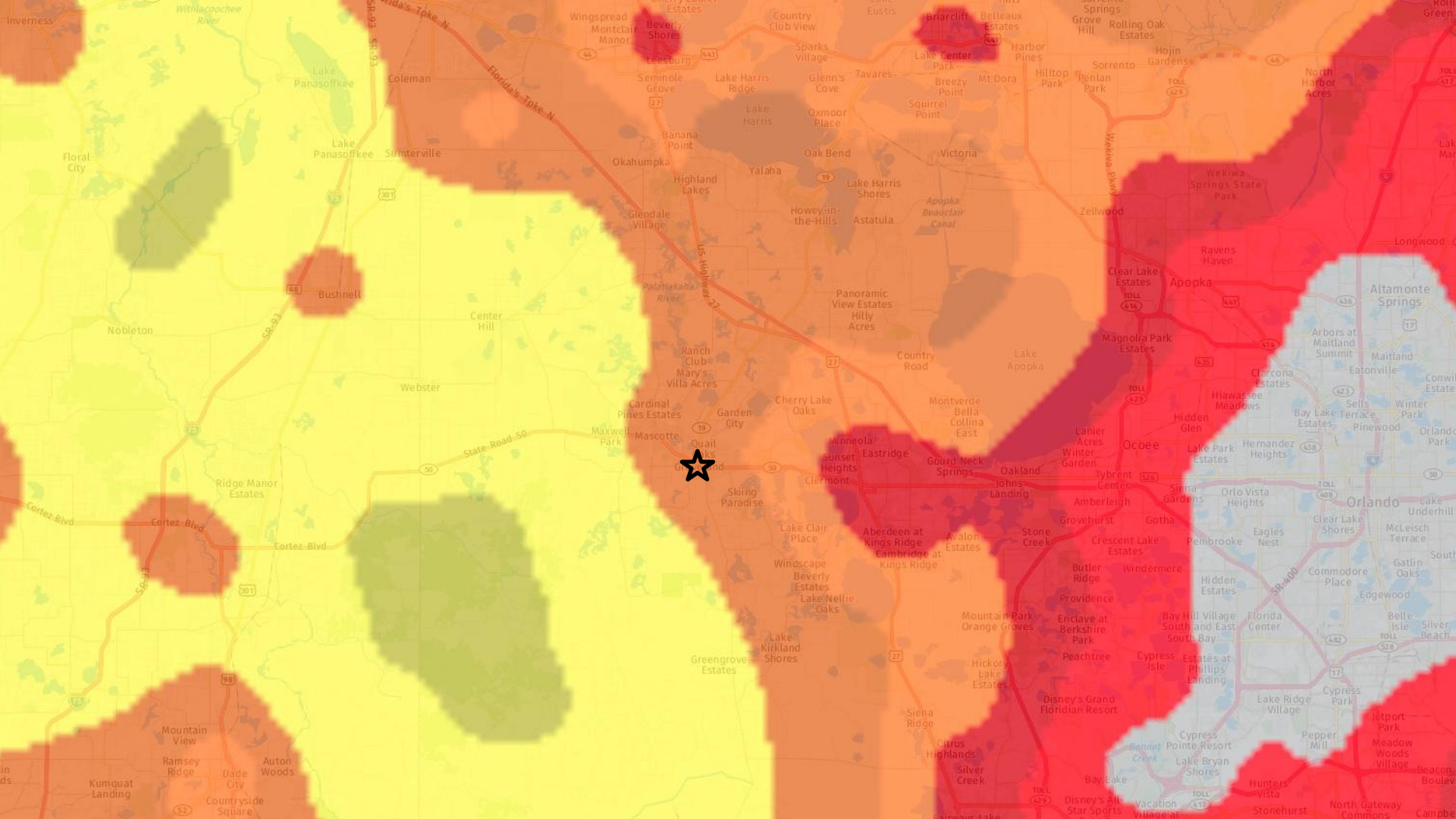
SKYGLOWPROJECT.COM

Bortle Scale

How to Read a Light Pollution Map









INTERNATIONAL DARK SKY ASSOCIATION

Kissimmee Prairie Preserve State Park

LIGHT TO PROTECT THE NIGHT

Five Principles for Responsible Outdoor Lighting



Illuminating
ENGINEERING SOCIETY



USEFUL



ALL LIGHT SHOULD HAVE A CLEAR PURPOSE

Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.

TARGETED



LIGHT SHOULD BE DIRECTED ONLY TO WHERE NEEDED

Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

LOW LIGHT LEVELS



LIGHT SHOULD BE NO BRIGHTER THAN NECESSARY

Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.

CONTROLLED



LIGHT SHOULD BE USED ONLY WHEN IT IS USEFUL

Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.

COLOR

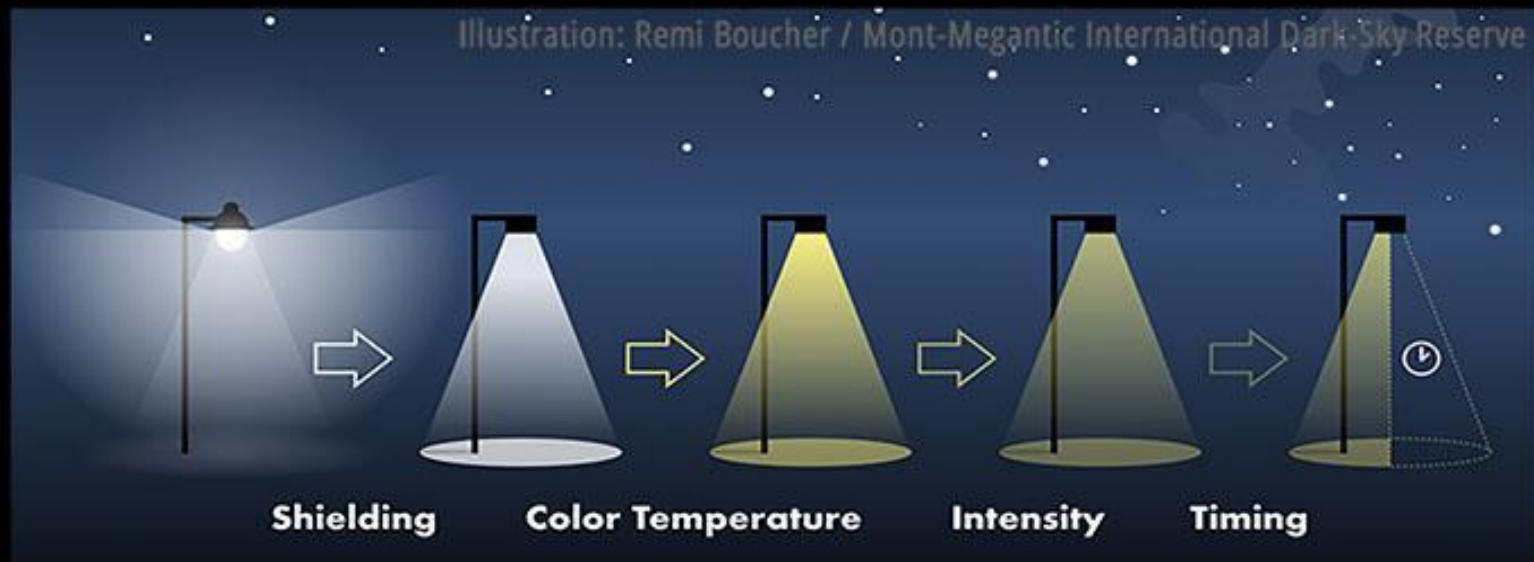


USE WARMER COLOR LIGHTS WHERE POSSIBLE

Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

Light Pollution Solutions

Illustration: Remi Boucher / Mont-Mégantic International Dark-Sky Reserve



Color Temperature



CANDLELIGHT



SUNRISE | SUNSET



DAYLIGHT



OVERCAST



PARTLY CLOUDY

International Dark-Sky Association (IDA)

- The leading authority on light pollution
- “Fixture Seal of Approval”
- “International Dark Sky Places”



Daytona Beach Shores



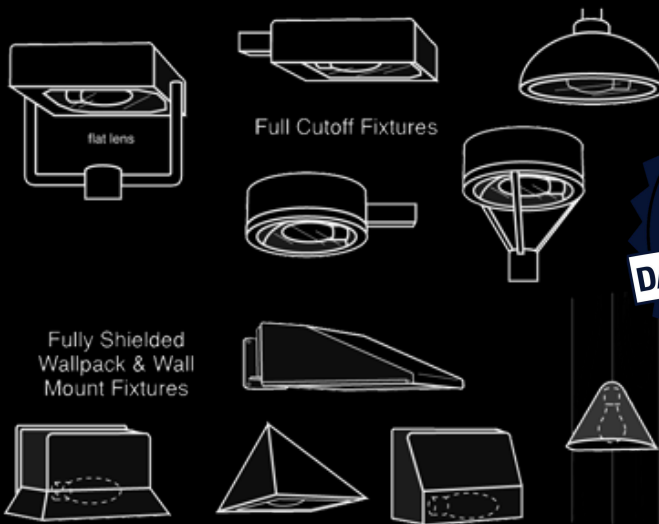
Unacceptable/Not Compliant

Fixtures that produce glare and light trespass



Acceptable/Compliant

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



Lighting Ordinance

- Limits color temperature and intensity of light sources
- Encourages adaptive controls
- Regulations for illuminated signage
- Addresses greenhouses and industrial use lighting and recreational lighting

Natural Charm Along the Transect



	T1	T2	T3	T4	T5	T6
COMMUNITY						
Town				Edge	Center	Core
Village				Center	Core	
Hamlet		Edge	Center	Core		
HOUSING						
Farm House		✓				
Cottage and ADU			✓	✓		
Duplex - Fourplex			✓	✓	✓	✓
Townhome				✓	✓	✓
Live/Work				✓	✓	✓
Garden Apartments					✓	✓
Mid-rise Apartments						✓
OPEN SPACE						
Conservation	✓					
Agriculture		✓				
Green/ Mid-Block Passages			✓	✓	✓	✓
Pocket Park			✓	✓	✓	✓
Squares and Plazas			✓	✓	✓	✓
Greenway Trail	✓	✓	✓	✓	✓	✓
THOROUGHFARES						
Boulevard						
Avenue/ Street					✓	✓
Road		✓	✓	✓	✓	✓
Alley/ Lane			✓	✓	✓	✓
LIGHT IMPRINT						
Clay Gravel Paving	✓	✓	✓			
Brick Paving	✓	✓		✓	✓	✓
Natural Creek				✓	✓	
Bio-swale/ Rain Garden			✓	✓	✓	✓
Curb and Gutter				✓	✓	✓
FLORIDA VERNACULAR						
Front Porch		✓	✓	✓	✓	✓
Arcades, colonnades, stoops			✓	✓	✓	✓
Florida Friendly Landscaping	✓	✓	✓	✓	✓	✓
Dark Sky Lighting						
AGRARIAN						
Forgeable Wilderness	✓					
Farm		✓				
Yard Garden			✓		✓	✓
Rooftop Garden				✓	✓	✓



CITY OF GROVELAND

Dark-Sky Community Certification

- 1. Develop a quality comprehensive lighting policy*
- 2. Demonstrate City commitment to dark skies*
- 3. Recruit stakeholder support*
- 4. Cultivate community commitment*
- 5. Collect evidence of success in light pollution control*
- 6. Establish and maintain a sky brightness measurement program*
- 7. Erect signage indicating the IDA designation*



INTERNATIONAL DARK-SKY ASSOCIATION

Projected Timeline

2021

Q1

Groveland Dark-Sky Virtual Workshop

Q2

Inventory City Lighting

Q3

Draft Dark-Sky Lighting Ordinance

Q4

Review and Revise Dark-Sky Lighting Ordinance

2022

Q1

Collect Letters of Support

Q2

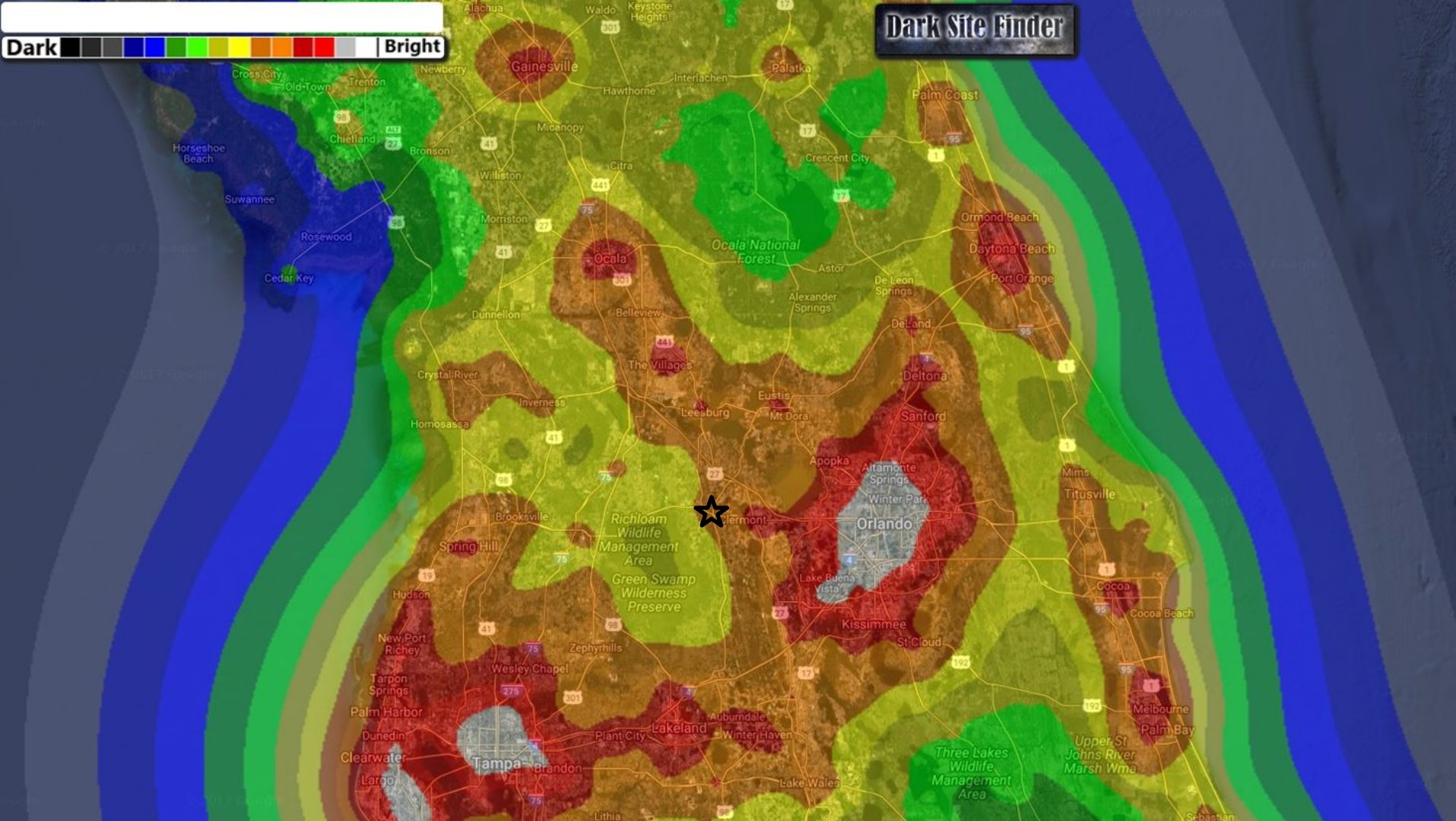
Adopt Dark-Sky Lighting Ordinance

Q3

Work with Retailers and Electricians

Q4

Complete IDA Certification Application





**City of Groveland
Community Development Department**

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